

CERTIFIED RESPONSES TO INFORMATION REQUESTS

Clean Air Act Information Request

Please find below further responses to the specified CAA information request questions.

Question 3

In response to your new requests, enclosed is a new letter and data from our consultants Haley & Aldrich (Exhibit A) that support our contention that the concentration of hydrogen sulfide in the biogas has been consistently low, less than 500 ppmv for an estimated 95% of the time during which the total set of results was recorded.

Question 4

Big Ox does not have any biogas flare stream flow monitoring data or calculations to submit to EPA beyond what it has already submitted.

Question 5

Big Ox has no biogas flare flame and temperature monitoring data to submit to EPA. Big Ox has already explained the equipment that Big Ox is routing gas to the flare only when a flame is present.

Questions 10 and 11

In response to your request, enclosed is a new separate letter and data from our consultants Haley & Aldrich (Exhibit D) that makes the adjustments suggested by EPA to the threshold calculations. The change in the results is minor, and it remains clear that Big Ox is below the levels that would require it to participate in the Risk Management Plan program. In fact, Haley & Aldrich in its calculations applied a 5,000 ppm projection for the concentration of the hydrogen sulfide in the biogas, even though the measured concentration of hydrogen sulfide is less than 500 ppm for the time that the gas was monitored.

Question 12

We have no further information to provide regarding these two events, which have not been identified as hydrogen sulfide releases.

Questions 13 and 14

We are working with Big Ox's safety manager to identify the design and operating standards and any hazard identification or assessments that Big Ox has employed or completed to ensure a safe facility. We will be sure to provide these to EPA when they become known and available.

Question 15

Big Ox uses portable gas monitors in many ways to determine the levels of gases in different areas, including within the plant and inside of tanks. Big Ox is working to compile this information from the devices and plans to submit this information to EPA once it becomes available.

Clean Water Act Information Request

The attachment to the January 27 CWA response did, in fact, contain Exhibits F through M. In accordance with EPA's directions, we are sending today these exhibits through hard copy in a manner complying with CBI treatment.

Question 5

Exhibit F of the set of Exhibits attached to the January 27 CWA response contains an additional diagram of Big Ox's process. Beyond the submitted diagrams, BOE is unaware of any other as-built production process flow diagram or pipe and component diagram to submit to EPA.

Question 6

A narrative regarding our wastewater treatment process is attached as Exhibit E.

Question 7

Below is a list of process upsets for the two components of the process that have been affected.

- Gas Energy Mixing (“GEM”) System

- September 2, 2016: First start-up of the GEM system. For the first several weeks of operation there were regular failures of the skimmer system, most commonly a broken skimmer chain. Typically the plant was able to immediately make repairs and start back up within a few hours.
- September 27 to October 6, 2016: The GEM system was down for replacement of the skimmer chain. The complete skimmer system had to be removed so that a new thin wall stainless steel chain could be installed.
- October 7, 2016: GEM system re-started. Skimmer paddle and chain failures continued. Repairs were made and operation continued.
- October 17 to October 22, 2016: The GEM system was down because of continuing issues with the skimmer system. Big Ox cleaned out the system and made repairs.
- October 23, 2016: GEM system re-started.
- October 24, 2016 to January 8, 2017: The GEM system was down due to skimmer issues and the discontinuance of wastewater influent from the city. During this lengthy period the skimmer system underwent an extensive redesign and rebuild. The primary change involved going to a new head duty skimmer chain.
- January 9, 2017: GEM system re-started.

- Centrifuge

- January 5 to January 12, 2017: One of the two centrifuges was down for a major repair. The one centrifuge that remained operational had sufficient capacity to process all digester effluent, so there was no impact on production.

Question 11

Big Ox has not received any copies of wastewater analysis from Sioux City, and is not aware of any of its wastewater being land-applied. In further response to this question, Big Ox is providing

a spreadsheet of effluent wastewater lab testing results (Exhibit F) and slides on daily wastewater flow to Sioux City (Exhibit G).

Questions 17 and 18

Big Ox is looking to determine whether there are any studies that are available for it to submit to EPA to clarify these issues.

CERTIFICATION STATEMENT

I certify that the following statements are accurate and that Big Ox has searched for and located the attached documents in its onsite and offsite records.


Clean Air Act

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to Section 113(c)(2) of the Act, and 18 U.S.C. §§ 1001 and 1341.

Clean Water Act

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature



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